White Paper

Accelerating Innovative Architectures for New Business Initiatives

Sponsored by: Cisco Customer Experience

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IDC OPINION

Enterprise IT has been on a decade-long transformational trajectory as organizations migrate from premise-based infrastructure and applications to distributed architectures, enabling resource pools of compute and storage to be consumed by employees in a variety of locations. The COVID-19 pandemic accelerated this effort: organizations had to rearchitect their environments overnight to support the biggest leap forward in remote working. IDC believes that there will be some pullback once the pandemic is under control, but the world will see a reimagining of the workplace, collaboration, business processes, workflows, software consumption, and hardware utilization underpinned by secure network architectures. This process will depend on, and enable, resilient, adaptive, and transformational IT.

The IT organization is at the center of this great data and workload pivot, which will change how organizations connect with customers, interact with colleagues, develop new revenue sources, and improve operational efficiency in a world most likely characterized by limited physical contact and high levels of virtual interaction. At the same time, the enterprise IT team will be stretched like never before. Amid a global recession, budgets will become very tight. CIOs will be expected to chase digital transformation (and the investment that it requires) while at the same time extending IT support to thousands of remote workers. This means that the trend to turn to third parties will continue. It will provide organizations with cost-effective expertise that is hard to come by inside the IT team, especially in the light of a global talent gap. It will also provide the flexibility and agility that is needed to adapt to modern-day networking challenges. It applies not only to the well-known flavors of managed services but increasingly for assistance with complex and transformational architectures. IDC believes that the equipment vendors and solutions providers are very well positioned to deliver these services, given their deep technology expertise and understanding of industry use cases.

IN THIS WHITE PAPER

This IDC White Paper reviews changes in the IT landscape, specific to new networking demands and the implications for CIOs, network managers, and technology professionals. The acceleration of digital transformation will have a profound impact on the IT team as it tries to do more with less. The move to cloud will only take enterprises so far, especially once the easy wins (e.g., low-level storage requirements but even enterprise collaboration technologies) have been achieved. IT teams will increasingly find themselves challenged from a skills point of view as they grapple with complex hybrid and multicloud environments. The need for clear, use case-specific architectures will become even
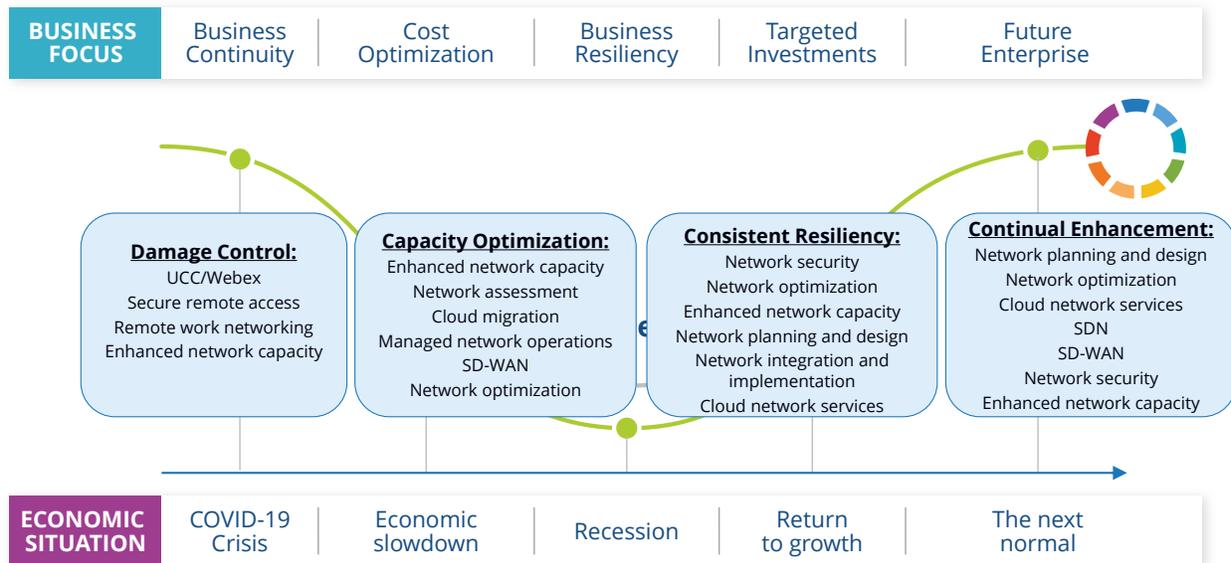
more apparent. This White Paper investigates the role of the vendor, especially in a network-centric environment.

SITUATION OVERVIEW

Over the past decade, IDC surveys had reflected what IT professionals saw inside their organizations: technology investments have become very strategic, with key investment areas being the shift to cloud, security, and network virtualization. On top of this, companies are preparing for an explosion of the Internet of Things (IoT) and the rise of artificial intelligence (AI). The outbreak of the COVID-19 pandemic kicked this process into high gear. We saw several years of digital transformation compressed into a handful of days. As part of our coverage of the impact of the pandemic on global technology markets, IDC conducts biweekly surveys of over 600 enterprise IT decision makers to understand current and future buying sentiment. Obviously, investment in technologies such as unified communications and collaboration (UCC), videoconferencing, and secure remote networking spiked in the first weeks of working at home. However, once the phase of ensuring capacity and financial stability is accomplished, organizations will begin to shift their focus to driving transformation, focusing on areas such as accelerating new innovative architectures and reimagining new post-COVID-19 business models (see Figure 1).

FIGURE 1

Professional Services for Enterprise Resiliency

BUSINESS FOCUS	Business Continuity	Cost Optimization	Business Resiliency	Targeted Investments	Future Enterprise

Damage Control:
UCC/Webex
Secure remote access
Remote work networking
Enhanced network capacity

Capacity Optimization:
Enhanced network capacity
Network assessment
Cloud migration
Managed network operations
SD-WAN
Network optimization

Consistent Resiliency:
Network security
Network optimization
Enhanced network capacity
Network planning and design
Network integration and implementation
Cloud network services

Continual Enhancement:
Network planning and design
Network optimization
Cloud network services
SDN
SD-WAN
Network security
Enhanced network capacity

ECONOMIC SITUATION	COVID-19 Crisis	Economic slowdown	Recession	Return to growth	The next normal

Source: IDC's *Five Stages to Recovery* research, 2020

This process will depend on, and enable, resilient, adaptive, and transformational IT. Resilient IT is all about how to optimize performance to de-risk IT to increase capacity and improve availability, no matter where you work. Adaptive IT refers to a workforce with the right technical expertise to address all issues. Transformational IT highlights empowering roles across the IT landscape to react quickly to

change and to drive innovation. As part of this effort, organizations will have to address questions such as the following:

- What should the architecture of the network of the future look like?
- What should network security look like in a world with hundreds of millions of remote workers?
- How can architectures be future proofed or designed with agility for the next crisis that comes along?

As organizations consider these questions, they need to evaluate how they can make their IT organization more resilient, adaptive, and transformative to address the changes that are coming.

These new digital services depend on having digital-ready infrastructure and connectivity in new places, not least because of the impact of IoT. The need to reduce latency, ensure local resiliency in IT service, and ensure data sovereignty are the central reasons behind deploying IT infrastructure in critical edge locations. The rationale is rapidly shifting from meeting customer expectations and convenience (e.g., Netflix and content delivery) to critical edge resources (think autonomous vehicles). This will require a new digital-native network – an architecture that is a far cry from the static, brittle, and complex environments found in most enterprises today.

The network will not only be a competitive differentiator but also be fundamentally different as new technologies such as software-defined WAN/LAN, Wi-Fi 6, and 5G sweep away the current architectures to create a network that is much more intelligent. Manageability (especially cloud managed), agility, reliability, scalability, and cost-effectiveness (not to be confused with cheap) will become table stakes but also pose significant architecture challenges usually in the realm of vendor network specialists. Choices in the way infrastructure is procured and deployed are transforming the role of IT organizations. In an agile DevOps/NetOps world, IT teams cannot afford to spend months architecting for this new world, with its new and shifting requirements against the backdrop of new networking technologies. In fact, the concerns raised previously require a level of architecture expertise not found in most IT organizations. On top of this, the world faces a global technology skills shortage, including in the networking space. According to the U.S. Bureau of Labor Statistics, there are approximately 700,000 unfilled technology jobs, which will most likely not be filled due to talent and skills gaps. Access to engineering skills outside the enterprise IT team could be a competitive differentiator. The focus will not be on network operations, but on innovative thinking – how to use the power of the network to drive revenue.

This means that an architecture vision will invariably have to reflect a use case focus and domain expertise will become essential. For many organizations, these skills were often procured from a systems integrator or other external partner. However, it seems likely that external networking architecture expertise can no longer be divorced from the environment in which the network will be deployed.

FUTURE OUTLOOK

The impact of COVID-19 has highlighted that transformation can no longer be a long multiyear process but must now be continuous and agile to meet the unknowns of future business requirements and competitive pressures. Enterprises will look for services firms to support their efforts and augment their skills gaps to enable them to move faster and more innovatively, coupled with the ability to leverage resources when and where they need them and the ability to pivot quickly in light of new business and economic challenges. With this challenge in mind, Cisco has had in place for many years professional

services, and its investment in tools, platforms, automation, telemetry data, AI, and machine learning (ML) has allowed the company to create a suite of services that can meet its customers' needs.

Cisco CX and Business Critical Services

Cisco Customer Experience (CX) develops solutions that cross all business units across Cisco, including products, services, sales, and marketing, in support of a customer's business, technology, and operational outcomes, which are critical to organizational success. The Cisco CX organization has created a portfolio of services, resources, tools, expert resources, and solutions to help customers extract maximum value from their technology investments.

Recently, the Cisco CX organization refocused its Business Critical Services (BCS) to address the functional needs of specific IT roles. The new Business Critical Services Lifecycle Portfolio aligns Cisco experts, analytics, insights, and automation with IT goals, ensuring each customer has access to the expertise it needs when, where, and how customers need it to consume and maximize the value of Cisco technology investments at every stage of their journey.

Cisco CX Business Critical Services provides a suite of cross-architecture subscription services that help customers ensure optimal performance of the IT infrastructure. Business Critical Services has developed an operational model for business resiliency to more accurately address the needs of specific buyers/users to ensure that they are receiving the appropriate insight and analytics, training, expertise, and support necessary to meet their business, technology, and operations objectives throughout their technology life cycle.

Cisco Business Critical Services Capabilities Designed for Architects

Business Critical Services provides customers with analytics-driven guidance throughout their project life cycle through designated Cisco resources, which consist of consulting engineers, customer success managers, project managers, self-service tools, and other expert resources either live or on demand. To enable continuous interaction, BCS customers are entitled to (at minimum) 20 (Essentials), 40 (Advantage), or over 100 (Premier) engagements with Cisco experts, leveraging deep analytics and predictive insights, to instill best practices to prevent future technical issues. As part of their relationship, customers can leverage Cisco experts for use of innovative technologies, such as machine learning, artificial intelligence, and diagnostic tools, derived from over 35 years of technology leadership. Each Cisco expert combines these data-driven insights with their knowledge of the client environment coupled with an understanding of the business objectives to maximize the time to value customers derive from their technology investments. Each tier provides insight, review, guidance, and expertise, as well as coaching sessions and workshops tailored for each IT role (see Figures 2 and 3).

FIGURE 2

Cisco Business Critical Services

Business Critical Services
Create a resilient, adaptive, and transformative IT

NEW Premier

Advantage

Essentials

Optimize performance and de-risk IT

Accelerate technology adoption and transformation

Flexibility to address the changing priorities of your large multi-domain Cisco® solutions

NEW Add-Ons

Specialized Expertise
Create your own adaptive workforce with access to the right expertise and intellectual capital to support projects and unplanned events.

Expert-as-a-Service
Augment your team with dedicated experts in cutting-edge technologies to fill your critical roles

Expertise powered by the analytics, insights, and automation of CX Collaborative Intelligence

Core networking   Data center   Security   Collaboration

NEW: Premier and Add-Ons available on June 26, 2020 in the U.S. and Canada

Note: Purchase more than 1 tier to extend the number of engagements per IT role.

Source: Cisco, 2020

Business Critical Services is offered across all of Cisco's architectures and addresses each IT role — architects, engineers, network operations, security operations, engineers, and DevOps personnel. BCS is available at three tier levels — Essentials, Advantage, and Premier, plus Add-On services:

- **Essentials**, developed for medium-sized enterprises, provides access to expertise, analytics, automation, and best practices to help customers optimize performance and de-risk IT.
- **Advantage**, targeted to public sector entities and cloud providers, helps organizations accelerate technology adoption and transformation.
- **Premier** empowers large enterprises, public sector customers, and service providers with the right amount of intelligence and guidance when, where, and how they need it — at every step of their Cisco journey.
- **Add-Ons** enable organizations of every size to quickly respond to changing priorities by providing technical expertise to create an adaptive workforce that can fill any talent gaps on a team. These services including Specialized Expertise and Expert-as-a-Service are available for every tier.

The value that underpins these multitiered subscription packages is the ability to access Cisco's expert resources and intelligence either through live interaction with subject matter experts or via a vast library of self-service learning tools and modules.

As each IT role has unique informational, support, and technology requirements, Cisco Business Critical Services includes specific solutions designed to address the unique needs of architects, which are consultative, and designed to help accelerate innovation. The services are configurable and based
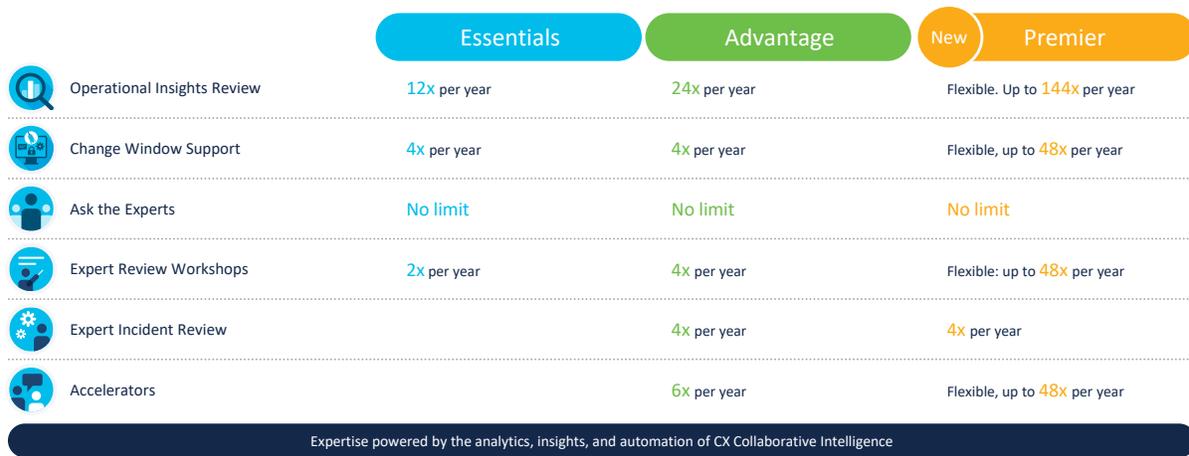
on the project, technology, and business initiative. The construct of BCS for architects helps them fill or augment resource gaps and empower knowledge transfer to de-risk, speed, and seamlessly execute next-generation strategy — ultimately to result in 50% more successful transformations.

FIGURE 3

Cisco BCS Tier Differences

What's in the tiers
CX BCS lifecycle pre-packaged portfolio

	Essentials	Advantage	New Premier
Operational Insights Review	12x per year	24x per year	Flexible. Up to 144x per year
Change Window Support	4x per year	4x per year	Flexible, up to 48x per year
Ask the Experts	No limit	No limit	No limit
Expert Review Workshops	2x per year	4x per year	Flexible: up to 48x per year
Expert Incident Review		4x per year	4x per year
Accelerators		6x per year	Flexible, up to 48x per year

Expertise powered by the analytics, insights, and automation of CX Collaborative Intelligence

Premier and Add-Ons in limited availability for the U.S. and Canada - Global availability targeted October 2020

Note: Services are consumable one at a time (sequential) and have variable duration. For operational insights, one deliverable per architecture at a time is included. The quantities shown are estimates based on typical consumption profile workshops scheduled in advance.

Source: Cisco, 2020

For example, for architects, Ask the Experts addresses technology hurdles to eliminate barriers and grow expertise with Cisco-led webinar coaching sessions. Cisco experts provide deep insights on architectures and technologies during these sessions.

Expert Review Workshops provide strategy and architecture reviews:

- Strategy reviews translate business goals and technology requirements into an architecture strategy, vision, and road map. They will validate your architecture concept or blueprint and its alignment with your stated vision and desired outcomes.

- Architecture reviews provide guidance on architecture structures, best practices, and recommendations to help drive IT change and transformation, enabling you to make best-practice recommendations to your architecture blueprint. Architects will be better able to translate business requirements into an architectural management vision, a multigeneration plan, and a target architecture model that aligns with your business and technology objectives.

Accelerators tackle specific customer-defined architecture challenges and use cases, with one-to-one remote technical coaching sessions with an expert. BCS services may be delivered directly by Cisco experts or by one of their highly certified partners.

In addition, architects can select even more in-depth expertise and resources, via BCS Add-On services. Architects can choose from the use of Specialized Expertise or the individual Expert-as-a-Service for a one-year subscription engagement. These are highly consultative and skilled resources, either teams or individuals, that can advise, accelerate, and partner to help organizations innovate faster. Both add-ons provide access to a deep pool of Cisco and partner expertise and enable the customer to pivot to address the dynamic needs of the business. The key difference between these add-ons is the resource allocation model:

- **Specialized Expertise** operates on a team-based collaborative model that provides access to the right expertise mix, both onsite and remote, to support focused engagements throughout the life cycle. Specialized Expertise for architects includes planning and architecture services. Project types supported include ongoing design development across Cisco architectures, technology migration plans, technology evaluation, high-level design, and multiyear planning activities.

- **Expert-as-a-Service** involves placement of a dedicated expert on a team to support specific needs or a critical role through a combination of onsite and remote consulting. Cisco's role-based experts range from a solution architect and consulting engineer to a project manager to enable large-scale transformation and adoption of multi-technology solutions. Solution architects provide deep domain knowledge and architectural design support. These experts work with customer technical leaders throughout the engagement, assisting with projects such as high-level design.

Every BCS offer is powered by the analytics, insight, and automation of the Cisco CX Collaborative Intelligence Cloud.

Collaborative Intelligence is Cisco's unique approach of combining human and digital experiences. Key tenets include:

- **Actionable telemetry** to connect customers, partners, and Cisco with secure insights across specific target systems
- **Use case-driven solutions** to deliver specific business outcomes across architectures
- **Contextual learning** designed to advance customers' and partners' workforce skill sets
- **AI/ML,** combined with customer data, to unlock unique insights
- **Digital experience** that brings all of this together in one common digital interface and platform, the new CX Cloud

CHALLENGES/OPPORTUNITIES

Cisco has clearly demonstrated its expertise in network operations, a sweet spot of professional services that are close to the technology with years of intellectual capital, innovation, and resources. It has expanded upon that expertise with its investments in building out Collaborative Intelligence, the combination of telemetry, data, benchmarking, AI, and ML coupled with its consultants to create subscription offers that are relatively easy to consume when customers need to use them. The intelligence that Cisco CX has developed is a differentiator for them.

Expanding into bleeding-edge consulting engagements, while not new for Cisco, has often been the domain of its larger global systems integrator partners. But for many global Cisco customers, when deploying new technologies, they require the skills and skin in the game from Cisco's deep bench of expertise that only Cisco can provide. These deployments are invariably in specific vertical markets. The world has moved on from generic network architectures (focused on moving packets from A to B) to a world in which the network is a differentiator that is unique to a vertical market. This means that, invariably, network vendors are becoming more interested and skilled in vertical markets. IDC sees significant opportunity for systems integrators and network vendors to work more collaboratively, but at the same time there could be tension as this new model plays. Cisco is working with qualified partners to engage in delivering solutions that we expect will alleviate much of this tension and hopefully lead to an even better customer experience.

Business Critical Services for Architects is specifically designed to augment existing teams, helping customers accelerate IT and business transformation. It is not designed for execution that can be managed by Cisco's partners. Balancing the relationships will be an important component of the offer's success.

CONCLUSION

For many forward-thinking enterprises, COVID-19 has exposed fissures in the architectural process that may have previously been overlooked or underprioritized. Gaps in talent and resources and limitations on time have made these fissures more expansive. IT organizations and business stakeholders will require an architectural rethink ensuring that IT and network investments are resilient, adaptive, and transformational and strongly positioned for innovation when the market and opportunities present themselves once again.

New innovative networking technologies such as software-defined WAN/LAN, Wi-Fi 6, and 5G ensure that the network is no longer an impediment to digital transformation but a market accelerant. Expertly designing, managing, and operating networks will be just as important as the data that traverses these networks. Faced with a scarcity of in-house skilled IT resources coupled with a growing talent gap, enterprises will increasingly turn to third-party services firms for a range of architecture support. Professional services experts at networking vendors are among those well positioned to help speed design and innovation projects that are more resilient, adaptive, and transformative for the "next normal."

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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